

## Science 6

### **COURSE DESCRIPTION:**

The 6<sup>th</sup> grade science course will introduce students to a variety of science topics, skills and ideas. Students will have the opportunity to explore several different scientific fields through research, experimentation, and interactive activities. Throughout the course, students will use the scientific method and understand that the scientific method applies to all scientific disciplines and endeavors.

### **COURSE OBJECTIVES:**

After completing the course, students will be able to:

- Plan and implement an investigation using the scientific method
- Collect, display and interpret data from a scientific investigation
- Identify and describe the relationship between force and motion
- Identify chemical and physical properties and classify matter based on these properties
- Understand and describe the relationship between matter and energy
- Explain the origin and path of energy and its importance to all life on earth
- Understand that traits are inherited and that traits can change over time
- Understand that organisms respond to external stimuli and identify these responses
- Know and identify the basic structure and components of the solar system, the earth's atmosphere and the earth's surface

**PREREQUISITES:** None

**COURSE LENGTH:** Two semesters

**REQUIRED TEXT:** None

### **COURSE OUTLINE:**

#### **Introduction to the Scientific Method**

- Scientific Method Steps
- Collecting, reporting, and analyzing data
- Drawing conclusions

#### **Physical Science**

- Chemistry – What is matter?
- States of Matter
- Chemical and Physical Properties
- Chemical changes/reactions
- Physics – Force and Motion
- Energy – What is energy?
- Energy Types and Sources
- Energy Transformations

#### **Ecology**

- Introduction to Ecology
- Energy in Nature – Interactions between matter and energy in the ecosystem

#### **Life Science**

- Cells – Introduction to Cell Therapy
- Genetics
- Organization in Living Things
- Stimulus and Response in Living Things

#### **Earth Science**

- Geology
- Astronomy